

Supplementary Figures

Supplementary Figure 1. Physiological effect of restraint stress. Change in average mouse weight with daily restraint over time. Tumor cells were injected on day 0.

Supplementary Figure 2. Effect of beta-blockade on metastasis. The frequency of metastasis-bearing mice was determined at 42 days after tumor cell injection.

Supplementary Figure 3. HPAF-II and Capan-1 pancreatic cancer cell lines are responsive to β -adrenergic signaling. A. Quantitative RT-PCR analyses of *ADRB1* and *ADRB2* expression on pancreatic cancer cell lines, normalized to RPL30 expression. B. cAMP accumulation in HPAF-II and Capan-1 cells (percent relative to stimulation by 10 μ M forskolin)

Supplementary Figure 4. Effect of β -adrenergic signaling on pancreatic cell proliferation. Panc-1 cells were treated daily with isoproterenol and the effect on cell proliferation was assayed.

Model 1		Model 2	
Parameter	Estimate (SE)	Parameter	Estimate (SE)
Intercept (α)	14.8456(0.1793)*	Intercept (α)	13.8663(1.1106)**
Baseline growth rate (ν)	0.0061(0.0123)	Baseline growth rate (ν)	0.1297(0.02175)**
Control + propranolol (β_1)	0.0361(0.0172)*	Stress (β_1)	0.1092(0.0307)**
Stress+placebo (β_2)	0.0758(0.0173)**	/	/
Stress+propranolol (β_3)	0.0475(0.0173)**	/	/

Supplementary Table 1: Mixed-effect model estimation results. * = p-value < 0.05, ** = p-value < 0.01.